

# Mała Czarna

- Gravity **25.7 BLG**
- ABV **12.1 %**
- IBU **92**
- SRM **81.7**
- Style **Russian Imperial Stout**

## Batch size

- Expected quantity of finished beer **25 liter(s)**
- Trub loss **5 %**
- Size with trub loss **26.3 liter(s)**
- Boil time **300 min**
- Evaporation rate **11 %/h**
- Boil size **44.6 liter(s)**

## Mash information

- Mash efficiency **80 %**
- Liquor-to-grist ratio **2.5 liter(s) / kg**
- Mash size **33.4 liter(s)**
- Total mash volume **46.8 liter(s)**

## Steps

- Temp **45 C**, Time **15 min**
- Temp **62 C**, Time **50 min**
- Temp **72 C**, Time **25 min**

## Mash step by step

- Heat up **33.4 liter(s)** of strike water to **50C**
- Add grains
- Keep mash **15 min** at **45C**
- Keep mash **50 min** at **62C**
- Keep mash **25 min** at **72C**
- Sparge using **24.6 liter(s)** of **76C** water or to achieve **44.6 liter(s)** of wort

## Fermentables

| Type  | Name                               | Amount         | Yield | EBC  |
|-------|------------------------------------|----------------|-------|------|
| Grain | Strzegom Pale Ale                  | 6 kg (44.9%)   | 79 %  | 6    |
| Grain | Strzegom Monachijski typ II        | 3 kg (22.5%)   | 79 %  | 22   |
| Grain | Strzegom Karmel 600                | 1 kg (7.5%)    | 68 %  | 601  |
| Grain | Strzegom Karmel 150                | 0.7 kg (5.2%)  | 75 %  | 150  |
| Grain | Strzegom Czekoladowy ciemny        | 0.7 kg (5.2%)  | 68 %  | 1200 |
| Grain | Oats, Flaked                       | 0.46 kg (3.4%) | 80 %  | 2    |
| Grain | Weyermann - Pszeniczny Czekoladowy | 0.5 kg (3.7%)  | 73 %  | 1001 |
| Grain | Jęczmień palony                    | 1 kg (7.5%)    | 55 %  | 985  |

## Hops

| Use for | Name         | Amount | Time   | Alpha acid |
|---------|--------------|--------|--------|------------|
| Boil    | Warrior      | 30 g   | 60 min | 15.5 %     |
| Boil    | Green Bullet | 30 g   | 60 min | 11 %       |

|      |         |      |        |       |
|------|---------|------|--------|-------|
| Boil | Mosaic  | 10 g | 50 min | 10 %  |
| Boil | Flyer   | 30 g | 50 min | 11 %  |
| Boil | lunga   | 30 g | 40 min | 11 %  |
| Boil | Fuggles | 30 g | 30 min | 4.5 % |
| Boil | Mosaic  | 20 g | 20 min | 10 %  |
| Boil | Chinook | 30 g | 10 min | 5.5 % |

## Yeasts

| Name        | Type | Form | Amount | Laboratory |
|-------------|------|------|--------|------------|
| Safale S-04 | Ale  | Dry  | 23 g   | Safale     |